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ABSTRACT

Canada's federal and provincial governments have called upon the forest industry to ensure protection of Aboriginal rights and include Aboriginal communities in forest management. The challenge is to design frameworks for multi-party cooperation in which multiple values and interests can be accommodated. To promote such cooperation, two research projects focused on establishing mechanisms to apply Aboriginal knowledge to industrial forest management, providing community training and capacity building to facilitate the equitable involvement of Aboriginal communities, and establishing a framework to monitor and evaluate First Nation-industry cooperation. A project involving the Alexis First Nation of Treaty Six, Millar Western Forest Products, and the Sustainable Forest Management Network (SFMN) (University of Alberta) conducted an Aboriginal land use study while training community members to continue the research; developed an information sharing agreement concerned with access to and use of community knowledge; developed a forestry curriculum and related career education for Alexis high school students; implemented community training and employment programs; and developed a mechanism to monitor the community-industry partnership and resolve conflicts. In the second project, the Little Red River and Tall Cree First Nations and the SFMN identified community attitudes and values regarding forest management, wildlife management, training and employment needs, and protection of subsistence activities and related them to forest management objectives. (SV)

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Turning First Nation Forest Values Into Integrated Forest Management Plans: Two Models in Alberta.

Paper Presented at the
Canadian Indigenous Native Studies Association Annual Meeting
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Introduction

Over the past twenty-five years there have been important developments that have reshaped the relationship between Canada's Aboriginal peoples and natural resources. Contributing to this reorientation has been a number of landmark court decisions that have redefined Aboriginal rights to lands and resources. Stemming largely from *Calder vs. British Columbia* (1973), the Supreme Court set into motion a general movement in governmental policy from one of denial and assimilation to the recognition of Aboriginal rights to traditionally used lands and resources; a ruling later supported by Section 35.1 of the Canadian Constitution Act (1982) that recognizes and affirms the existence of Aboriginal and Treaty rights of all Indian, Inuit and Metis peoples in Canada.

Amidst this time of change there have been 11 Comprehensive Land Claims (i.e., modern day treaties) signed with Canada's First Nations, all of which, with the exception of the Nisga'a of British Columbia (1999), being signed with First Nations of Canada's northern territories. These settlements have in affect provided these First Nations with an equitable as well as a legally defined role in the management of their traditionally used lands and resources. These and other events (i.e., *Berger Commission Hearing and Report, 1975-77; S.C.C. v. Sparrow, 1990; Delgamuukw v. British Columbia, 1997; S.C.C. v.*

Marshall, 1999*)* have forced government, industry, and Canadians in general to recognize the unique rights of Canada's First Nations to natural resources.

Specific to the management of Canada's forests, federal and provincial governments have called upon the forest industry to not only ensure the protection of Aboriginal and treaty rights but to include Aboriginal peoples in the planning and assessment process. This requirement is outlined in Canada's National Forest Strategy (adopted in 1992 and renewed in 1998) as well as in the 1995 Canadian Council of Forest Ministers' Criteria and Indicators of Sustainable Forest Management. However, despite the affirmation of Aboriginal land rights, as well as recognize need to involve Aboriginal peoples in natural resource management, it will no doubt take many years for the various and competing interests to work out final relationships to renewable and non-renewable natural resources. The challenge, therefore, is to design frameworks for multi-party cooperation in which multiple values and interests can be accommodated.

It is in response to this challenge that we, in cooperation with First Nation and industry partners, have undertaken two research projects aimed at developing strategies that promote cooperation in a manner that respects the rights and responsibility of those involved. While the strategies used in each of the two projects differs, the primary objectives are the same. They include: 1)

establishing mechanisms in which Aboriginal knowledge can be applied to industrial forest management; 2) to provide a source of training and capacity-building at the community level in order to facilitate the equitable involvement of Aboriginal communities in forest management, and; 3) establish a framework for which First Nation – industry cooperation can be exercised, monitored and evaluated. At the most basic level of operation each of these projects demonstrates the importance of dialogue when adopting more sustainable approaches to forest management.

Case Study One: The Alexis First Nation

The first of these two projects involves the Alexis First Nation (AFN) of Treaty Six and Millar Western Forest Products based in Whitecourt, Alberta. In cooperation with the Sustainable Forest Management Network at the University of Alberta, a cooperative framework has been developed that has put into operation capacity-building programs in cultural, natural resource and business management that together will enhance the long-term involvement of the AFN in forest management as well promote the sustainable development of Millar Western's Forest Management Unit.

The first phase of this partnership has involved the undertaking of a community land use study in order to document the historical and contemporary uses of the AFN. There have been an increasing number of Aboriginal

communities undertaking land use research; at last count there have been 9 studies completed and 15 in progress in Alberta alone. Despite the recognized benefits of conducting Aboriginal land use studies a number of problems have become evident in the way in which these studies have been conducted and how that local knowledge is being used in the land management process.

Because many Aboriginal communities lack the time, technical training, and professional research skills to conduct land use research effectively, outside consultants and academics are often contracted to administer, but more often, to conduct community research. With the level of community involvement seldom exceeding the administering of questionnaires and land use surveys, rarely has there been a transfer of skills that enables community members to continue the research once the consultants leave the community nor has there been an empowering of local residents in the land management process. This failure has proven critical to the issue of community ownership in that by failing to demonstrate the relevance of conducting land use research, community-based research is often seen as, to borrow a term from Hubbard (1996), "community housework" that is of little social value and receives little sustained attention. Thus by failing to transfer the necessary skills and experiences to community researchers the dichotomy between those who produce land use knowledge and those who are most affected by it remains, thereby reinforcing the dependencies

that have long worked against Aboriginal communities seeking change.

An additional problem with the way in which land use research has been conducted has been the lack of agreed upon protocols for how local knowledge is to be shared and implemented into the decision making process. Because land use research is generally conducted on the basis of making culturally informed land use decisions, land use data, or a copy thereof, is often made available to industry personnel who are involved in making land management decisions. However, once removed from community control, industry land managers are free to elicit specific elements of local knowledge (e.g., medicinal plant locations) and insert them into management models, thereby empirically removing aspects of the local knowledge from community control as well as its cultural context. As a result, land use information is often misrepresented and used inappropriately in ways that do not serve community needs and aspirations.

Robinson and Ross (1997: 607) have similarly noted that despite the expressed stipulation by Aboriginal communities to retain control of the information collected, industry generally houses the GIS data, as communities often lack the capacity to store and retrieve computerized GIS files. This causes a major problem in that by textualizing and making land use information available to industry planners, the text becomes the authoritative source rather

than the holders of the knowledge. Recognizing these challenges our involvement with the AFN has been to develop community-based expertise to plan, develop, and carry-out an on-going land use research program. Although we have been involved in the actual research process, the training of Alexis band members has been our primary objective. Community capacity-building has been the key, and the capacity-building process has been developed in ways that are culturally appropriate to the AFN. This specifically has involved the development of an information sharing agreement that dictates how community land use knowledge is to be shared (or not shared) and used in the land management process. In addition to establishing specific protocols for the implementation of local knowledge into forest management planning this framework provides guidelines for consultation between Alexis and Millar Western thereby overcoming many of the cross-cultural barriers that can limit effective communication.

Building upon this foundation, phase two of this project addresses the actual involvement of the AFN in forest management and operations. Despite the recognized need to enhance the involvement of Aboriginal communities in the forest industry there remain formidable obstacles to achieving this goal. Among these challenges include: the lack of formal education and technical training within the communities to assume an equitable role in forest management; the geographical and social distances that limit the attainment of such skills and training; and the associated economic realities that continue to plague many of Canada's Aboriginal communities. With perhaps the exception of geographical distance, the AFN suffers from each of these challenges. However, owing to the partnership that has been established between Alexis and Millar Western a unique opportunity exists which is serving to overcome many of these obstacles.

Curriculum Development

From the outset it was agreed to by all parties that if the AFN is to assume an equitable role if forest management future initiatives need to be directed towards Alexis youth. Therefore, in order to increase the number of professionally trained Aboriginal foresters and resource managers a number of curriculum-based objectives have been co-developed. These include the introduction of a school curriculum that addresses forestry practices, Aboriginal

land rights, and educational material devoted to Aboriginal resource management both in and outside of North America. This classroom instruction also involves presentations by practicing Aboriginal foresters who can address industry challenges and opportunities as well as post-secondary educational opportunities. A Job-Shadowing Program is also being implemented where Alexis high school students work directly with a Millar Western forester for a day or two undertaking daily activities. These activities are being supported locally through community-based field camps and forestry labs that demonstrate different forestry techniques – ranging from tree planting to GPS training. These field camps also include instruction and lessons from Alexis Elders in traditional forest uses and practices.

Training and Employment Programs

The second objective involves the implementation of community training and employment programs. Because the realities of economic dependency have long worked against members of the AFN supporting economic development initiatives, anxiety over the unknown has often led to adherence to the status quo. Thus the continued exclusion of the AFN from economic opportunities has further promulgated the perceived normality of economic dependency, thereby reinforcing the acceptance of their own economic marginality (Ponting, 1997). However, through an employment and training program designed to enhance

the role of the AFN in forestry operations, band members are taking direct control of their own self-defined socio-economic development. This is being achieved through increased (and measurable) employment goals in all phases of forestry operations – from planning to production. In order to help meet projected employment goals, an internship program with rotations through all phases of forestry operations is being implemented as well as on and off reserve technical training in GIS/GPS, silviculture, block layout and plot assessment. As a motivating factor academic and financial incentives are being made available to community members for the attendance and completion of training programs. And finally the establishment of a parallel community-based management structure is being implemented to work directly with Millar Western management in meeting the above objectives.

Monitoring and Evaluation

The establishment of a management structure to oversee the implementation of this cooperative framework is seen by both Alexis and Millar Western as critical to the success of the partnership. The experience of other First Nation – industry partnerships suggest considerable variation in outcomes. While some partnerships retain the rhetoric of cooperation, in reality they have proven to be little more than an extension of industry's management priorities, with First Nations supplying the labor. Other arrangements have made a

significant advancement towards collaboration through formalized agreements that establish rights and obligations of each partner. These variations can be accounted for by recognizing that 'success' is dependent upon effective implementation at both the community and industry levels. That is, within Aboriginal communities the implementation of industry partnerships requires band members to coordinate their actions to coincide with industry goals. Industry, too, has needed to implement shared management regimes and to delegate management and production responsibility to communities. Further, there is little reason to expect a partnership established by band leaders and industry management will translate into acceptance at the operational level. This is especially true in cases where there is a history of conflict between First Nation communities and resource industries. Implementation can therefore stall at any of three different levels of operation – with the community, with industry, or at the community-industry interface. Anticipating these challenges we have established a mechanism by which this partnership can be monitored and evaluated on a continual basis. This is being approached by embedding two facilitators into the management framework. These facilitators/liaisons (a graduate student from the University of Alberta and an appointed band member) are in the process of establishing a long-term adaptive framework for analysis, including mechanisms for managing conflict. This will be

accomplished largely through: 1) undertaking an analysis of successful and unsuccessful forest management arrangement in order to build upon tested strategies and avoid past mistakes; 2) identifying and articulating barriers, whether cultural, social, or economic, that may impede effective community-industry collaboration; 3) facilitate communication when conflict arises; 4) provide immediate feedback to Alexis and Millar Western when conflict arises so appropriate actions can be implemented, and; 4) develop criteria and indicators that reflect the interests and ideological positions of both the AFN and Millar Western in sustainable forest management.

It is our hope that the above strategies will allow for the integration of local knowledge and understanding to be applied to new and adaptive approach to forest stewardship. While the long-term objectives of this partnership are to both foster the capacity of the AFN to assume an equitable role in forest management and to facilitate the orderly development of Millar Western's forest management agreement, these goals will not be achieved overnight. Understanding that positive change will only occur through incremental gains attained through training, education, and employment opportunities, a long-term approach has been taken in this partnership. This project's short-term goal has been to provide a foundation in which incremental change can occur as well as implementing a framework in which such change can be monitored and

evaluated for improvement.

Case Study Two: Little Red River and Tall Cree First Nations

The second project involves the Little Red River and Tall Cree (LRR/TC) First Nations, located in north-central Alberta, Canada. Residing in five separate reserves, the collective population of the LRR/TC First Nations is approximately 4,000. The local environment is classified largely as boreal mixed-wood and boreal subarctic eco-regions. This region of the boreal forest provides critical habitat for free-roaming wood bison, moose, and scattered populations of woodland caribou. This region is also home to approximately 236 species of birds, 43 species of mammals (Westworth and Associates Ltd., 1990), as well as a mosaic of rare vegetation. Signatories of Treaty Eight (1899), the LRR/TC First Nations are constitutionally assured of their continued rights to hunt, trap and fish in all seasons of the year on all unoccupied crown lands. This constitutional protection has therefore imposed a fiduciary obligation on the Canadian government to maintain an environment conducive to the exercise of those rights.

Since the 1950s the expansion of agriculture into the lower Peace River region, coupled with the development of the forest industry, has resulted in the clearing of approximately 4,000,000 hectares of forested lands; lands that constitute the traditionally used and occupied territory of the LRR/TC First

Nations. Over this same time period, rights to the remaining commercial timber have been awarded to non-Aboriginally owned forest companies in the form of Forest Management Agreements (FMA). The annual allowable cut for this region is currently 1,000 hectares per year; a volume that does not include the extensive network of industrial access roads needed to support this industrial activity. Owing to agricultural and industrial encroachment, coupled with a growing population of the LRR/TC First Nations (a rate of 4 percent per year), band leaders argued that the remaining forested lands were becoming incapable of supporting a hunting and trapping lifestyle of community members; a lifestyle constitutionally affirmed and protected.

In response to what the LRR/TC First Nations saw a failure by government to recognize rights of treaty, the LRR/TC initiated a dialogue with the federal and provincial governments in an effort to ensure their rights to lands and resource were protected. In 1995 the efforts of the LRR/TC First Nations were awarded through the formation of a cooperative management agreement signed between the LRR/TC First Nations and the Government of Alberta (Departments of Environment Protection and Aboriginal Affairs). In the form of a Memorandum of Understanding, this agreement has established an institutional framework for co-operative forest management for a 20,000 km_ Special Management Area (SMA) stretching throughout the Lower-Peace River

Valley. Following four years of negotiations and political maneuvering the LRR/TC First Nations and the provincial government finalized the terms of agreement and implementation is now underway.

The mandate by which the co-operative board operates is based upon the concept of sustainability, adaptive management, and the meaningful consideration of local knowledge, values, and needs in resource management. This mandate recognizes the need for sustainable and adaptive management so as to ensure human use of environment does not exceed the ecosystem's ability to perpetuate itself for the use and enjoyment of future generations.

In addition to gaining a degree of shared management responsibility for the SMA, LRR/TC were also successful at negotiating a commercial timber permit for the SMA. However, in being awarded a commercial timber permit, concerns were expressed by LRR/TC band members regarding their involvement in the very industries that were seen, by many, as the greatest threat to community survival. That is, to many band members, and specifically the elders, industrial timber harvesting is seen as being in direct conflict with the sustainability of their homeland. However, with high rate of on-reserve unemployment and a growing percentage of band members receiving some form of social assistance, band leaders were intent on finding a way in which local concerns could be addressed while still providing much needed economic

opportunities for band members. Thus the question facing band leaders was how to incorporate local concerns and values into forestry management without sacrificing financial goals and business requirements of industrial forest management. Specifically, the question posed was to what extent does the incorporation of Aboriginal forest values affect the likelihood of achieving industrial forest management objectives; that is, the annual allowable cut.

In partnership with the Sustainable Forest Management Network at the University of Alberta, the LRR/TC First Nations have undertaken a process to address this question. Specifically, this research set out to establish a set of local criteria and indicators (C&I) for sustainable forest management that are derived directly from the community perspective.

The C&I approach to forest management resulted largely from the work of the United Nations Conference on Economic Development (UNCED) (1992) which addressed the need to arrive at specific criteria and indicators of sustainability that could define, monitor, and guide management of the world's forests. Recognizing the need to measure and monitor ecosystemic change, Chapter 11 of Agenda 21, 'Combating Deforestation' called for "the formulation of scientifically sound criteria and guidelines for the management, conservation and sustainable development of all types of forests." Since this time the application C&I have been applied to regional, national, and

international levels of forest management.

In Canada, national C&I were implemented in 1995. Following three years of nation-wide consultation with government officials, NGOs, Aboriginal and non-Aboriginal communities, foresters and academics, the Canadian Council of Forest Ministers (1995) produced a set of six national criteria and 83 indicators for evaluating forest sustainability. However, while providing a comprehensive framework from a national perspective, a review of the literature suggests that there has been little effort to apply C&I at the local level and even fewer examples of C&I being applied in an Aboriginal context. Therefore, this research has set out to define a set of local criteria and indicators that are specific to the LRR/TC culture and their continued land use needs. It is our hope that by developing local indicators of sustainability, forest managers will be able to demonstrate how managing for certain performance objectives (e.g., annual allowable cut) affects the achievement of other community objectives (e.g., the availability of critical moose or bison habitat) thereby creating an adaptive management framework in which alternative management scenarios can be developed and decided upon.

While this research is ongoing, and the finding are quite preliminary, initial results suggest that the use of criteria and performance indicators can provide an accurate assessment of forest management as it affects local land use

concerns. Specifically, this approach has: 1) established a mechanism by which forest management can be monitored and assessed in a manner that considers LRR\TC cultural and land use needs; 2) facilitates an assessment of existing and future forest management practices in the LRR\TC territory based upon prevailing cultural, social, ecological and economic criteria; 3) provides a local assessment of forest management and establishes a basis for continuous improvement; and 4) serves as a means of conflict management by articulating the diversity of landscape values nested with the LRR/TC communities.

It is important to note that the results of this research (and decisions made from them) are not meant to represent a definitive set of C&I, but rather should be seen an initial stage of ongoing community-based research. Recognizing the pluralism and dynamics of local value formation, this phase of research represents an initial approximation of local values that have been arrived at by interviewing a relatively confined sample of community members. As defined by LRR/TC band members, criteria for sustainable forest management in the Special Management Area, include (see Table 1):

I. Modifying Forest Management Operations so as to Reduce Negative Impacts to Wildlife Species.
II. Increase the Diversity of Forest-Based Economic, Social and Cultural Benefits Available to the LRR\TC Communities.
III. The Protection of LRR\TCFNs Aboriginal and Treaty Rights to Hunting, Fishing, Trapping and all Other Land-Based Activities.

Table 1. Examples of Local Criteria and Indicators for Sustainable Forest Management.

Criteria	Critical Element	Local Value	Goal	Indicator	Management Objective
1) Modify Forest Management Operations so as to Reduce Negative Impacts to Wildlife Species.	Species Diversity and Availability	Healthy population of woodland caribou.	Enhance critical habitat for woodland caribou.	Protection of critical habitat blocks of old growth conifer along the Caribou Mt. slope.	Long-term harvest rotation of critical conifer habitat along the Caribou Mt. slope, specifically in elevations between 1500-2000 feet.
1) Modify Forest Management Operations so as to Reduce Negative Impacts to Wildlife Species.	Species Diversity and Availability	Healthy Population of Moose in the Management Area	Enhance Necessary Habitat for Moose	Actual Increase in Necessary Habitat – Eliminate the practice of scarification following forestry operations.	Eliminate the Practice of Scarification in the Management Area: *Utilize alternative silviculture methods: - Controlled Burns. - Hand Scalping followed by hand seeding and planting.
1) Modify Forest Management Operations so as to Reduce Negative Impacts to Wildlife Species.	Species Diversity and Availability	Healthy Population and Continued Availability of Whitefish.	Reduce run-off caused by clearcuts into primary fisheries.	Increase buffers along the Lawrence River as it flows from the Caribou Mts. into the Peace River.	Increase buffers to no less than 300 m. from each shoreline of the Lawrence River.
2) Increase the Diversity of Forest-Based Economic, Social and Cultural Benefits Available to the LRR\TC Communities.	Increased Forest Sector Employment Opportunities for LRR/TC Band Members.	Enhance the Managerial and Technical Capacities of the LRR\TC in Forest Management.	Increase the Level of Training and Employment Available to LRR\TC in the Forest Sector.	Develop an Operating Business Plan that will address Training, Employment and Business Development Goals and Objectives.	Increase Seasonal and Full-time Employment in Forest Sector by 10% by 2003.
2) Increase the Diversity of Forest-Based Economic, Social and Cultural Benefits Available to the LRR\TC Communities.	Increased Involvement of the in Forest Management.	To Achieve an Equitable Role in all Phases of Forestry Planning.	Community-Approved Consultation Process for Forest Management Planning.	Framework for community involvement in forest management planning (FMP).	Implementation of Community Consultation Process for FMP by 2001. * Including: Youth, Women, Wage-Earners, and Subsistence Harvesters.
3) Protection of LRR\TCFNs Aboriginal and Treaty Rights to Hunting, Fishing, Trapping and all Other Land-Based Activities.	Continued Hunting, Trapping and Fishing Rights are Protected.	Ensure that the LRR\TCFNs Maintain Access to a Lands Base Sufficient to Meet Their Current and Future Needs.	Maintain Area of Land Currently Available to Hunting, Trapping and Fishing is Maintained.	Develop Long-Term Network Plan for Industry Operations to Control Access Linkages.	Implementation of Long-term (20 yr.) Land Management Plan by 2002.

Methods Used In Assessing Local Landscape Values

Contributing to the completion of this research has been the partnership the LRR/TC First Nations have established with the Sustainable Forest

Management Network at the University of Alberta. Owing to this partnership we have been able to pull from a significant amount of biological and socio-economic research already completed. This past research includes critical vegetation research and landscape mapping, traditional ecological knowledge of critical wildlife species (i.e., woodland caribou, moose, and woodland bison), and research regarding environmental and community health. Our research has also benefits from previous work concerning the socio-economic changes within the LRR/TC communities. This research has provided a better understanding of how personal values may be evolving as the subsistence-based economy of the LRR/TC First Nations is supplanted by wage earning opportunities. In addition, community land use and occupancy research, conducted in partnership with the University of Alberta School of Native Studies, has provided a base-line of information regarding past and contemporary land use patterns, thereby articulating visually the spatial and temporal changes/continuity in community land use.

Combined with direct observation, the use of semi-structured and unstructured interviews provided additional information regarding the observed. The interview format was intended to be open-ended so as to allow for elaboration of the meaning and importance of resource use, the description of resource locations, as well as local perceptions of forest management (and the

idea of 'managing' resources in general). The interview sample sought in this research was an accurate representation of the LRR/TC community population. The interview coverage included a range of age cohorts ranging from 16 to 72. The sample sought included those known to have the greatest knowledge and personal extent of land use, such as LRR/TC trappers; available male and female elders; knowledgeable hunters and/or fishers as recognized by community members (i.e., snowball methodology); as well as band members who are or have been employed by resource development industries. Therefore, this approach recognizes that within the LRR/TC communities exist a range of interests, each with differing values (often conflicting), attitudes, concerns, and perceptions that need to be considered in the planning process.

In addition to the differences that exist between Aboriginal and non-Aboriginal landscape values are the value differences that exist between male and female community members. The value difference ascribed to specific resources and the preferred vision of the landscape's future can generate very different cognitive maps between Aboriginal and non-Aboriginal and male and female resource users. The recognition of these differing perspectives must be incorporated into a valuation methodology if an accurate portrait of community values is to be developed. Because there exist very real differences between male and female land use, a gender-based analysis of how 'place' and 'space'

are used, and therefore valued, has been incorporated into the research design. Previous research (Natcher, 1999) in other Cree communities has shown that areas used by women are often nested within areas noted to be used only by men for specific subsistence activities. When not a primary use area of men, whether owing to temporal or ecosystemic change, these areas may be considered by land managers as areas of limited use, and thus limited value. However, by classifying these areas as 'limited use', land use planners (generally men) may be inadvertently justifying the conversion of the areas to an alternative land use (i.e., clearcut) that may be of little value to local women. Thus by failing to consider the landscape values held by women an inaccurate portrait of community values is created. However, if recognized, men's and women's knowledge of the shared landscape can be brought together effectively, thereby articulating the held values of each.

It is important to note, however, that C&I research is not without its methodological challenges, especially when applied in an Aboriginal context. Because this approach requires band members to compartmentalize the biophysical components of the landscape C&I may in some ways conflict with the Cree worldview, a worldview that places an equal significance on all environmental features. Owing to this holistic understanding of the environment band members may have difficulty separating specific biophysical features of

the landscape into distinct categories as well as segment the social, cultural, spiritual, and economic aspects of environmental interaction. A similar challenge to eliciting local values is the questioning methods or the ways in which information is sought. The direct question, which serves as an accepted way of gathering information in western culture, is often considered inappropriate by Aboriginal participants. Based upon initial interviews it is our experience that community members are more likely to "talk around the question" until the information is provided rather than responding directly. Similar to Nelson's (1980) experience with the Inupiat of northwest Alaska, we have found that community members rarely give direct advice or tell another person what to do other than through narrative. Unfortunately, few researchers can fully appreciate the meaning and complexity of Aboriginal narratives, a limitation that often leads to misunderstanding. Owing to these cross-cultural challenges, as well as the need to continually monitor and evaluate changing community values, a transfer of skills from researcher to community is required to help alleviate cross-cultural mis-communication as well as to ensure research continuity. Because adaptive forest management requires the continued monitoring of ever-changing socio-economic values of community members this research partnership has emphasized a process of capacity-building in order for community researchers to assume responsibility for future and ongoing

analysis.

Conclusion

Because forest management has long been characterized by conflicting social-political perspectives there exists a need for a shared and articulated understanding of local values and concerns in order to minimize the level of confrontation surrounding forest management issues. The approaches adopted in these two case studies recognizes this diversity, as well as the pluralism of values nested within Aboriginal communities. By emphasizing a process that allows for the articulation of alternative perspectives it is our hope that those involved will come away with a better understanding of the others point of view. Thus by gaining a better understanding of alternative perspectives it is our hope that a greater cultural awareness may develop thus leading to the reevaluation of current approaches to forest management and future policy decisions.

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